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Roseburg District Office
777 N.W. Garden Valley Blvd.
Roseburg, Oregon 97470

Roseburg Timber Management Plan Decision



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R67
1983
Suppl.

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Decision



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United States Department of the Interior

BUREAU OF LAND MANAGEMENT

ROSEBURG DISTRICT OFFICE
777 NW Garden Valley Boulevard
Roseburg, Oregon 97470

This is the Record of Decision for the Roseburg Timber Management Plan. The decision represents the final step in a land use planning process which began in 1978.

Throughout the planning period a number of agencies, groups and individuals have been involved. You have played a major role in shaping this decision as well as basic policy for the O&C lands through your suggestions, challenges and insights.

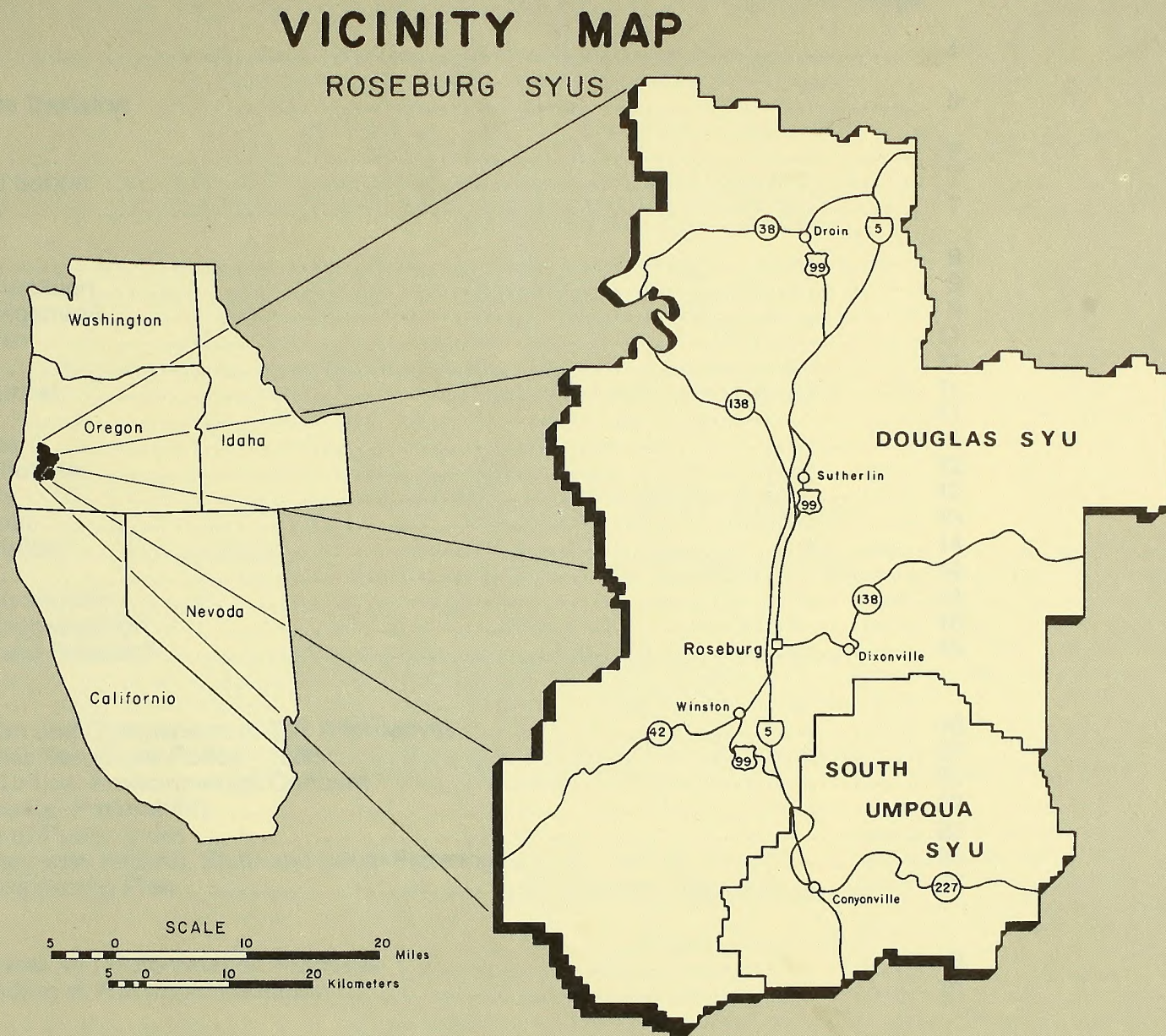
I extend my thanks to each of you for helping BLM develop a balanced plan that will serve the people of Oregon and the nation for the next decade.

Sincerely yours,

James E. Hart
James E. Hart
District Manager

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Figure 1



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Decision

I recommend adoption of the New Preferred Alternative, Alternative 9 of the Roseburg Timber Management Final Environmental Impact Statement of May 1983.

Furthermore, I recommend:

- the adoption and implementation of mitigation measures and design features described in the Roseburg FEIS Chapters 1 and 3, which represent the most reasonable and practicable means to minimize or avoid environmental harm.
- the monitoring of these mitigation measures and design features, as well as the technical assumptions and land-use plans on which the allowable cut is based, to assure that consistency is maintained during operations under this plan.
- the adoption and implementation of applicable land-use decisions contained in the Management Framework Plan (MFP).

Signed James E. Hart
District Manager, Roseburg

Date: SEP 30 1983

I approve the timber management plan and the underlying MFP decisions as recommended and hereby declare that effective October 1, 1983, the annual productive capacity (allowable cut level) of the Douglas and South Umpqua Master Units in the Roseburg District is 40,470,000 cubic feet.

Formal protests to this plan, submitted in accordance with the Bureau planning regulations (43 CFR 1610.5-2), will be considered timely if filed by October 31, 1983.

Signed Arthur D. Samuel
State Director, Oregon

Date: SEP 30 1983

Summary of the Decision

This is a summary of the 10-year timber management plan for the Bureau of Land Management's Roseburg District.

The decision is to adopt the New Preferred Alternative (Alt. 9) described in the Roseburg Timber Management Final Environmental Impact Statement.

The central feature of the plan is the annual allowable harvest of 40.5 million cubic feet (approximately 247 million board feet, MM bd. ft., Scribner 16-foot equivalent) of timber from 367,500 acres of commercial forest land (CFL) in the Roseburg SYUs.

The CFL base totals 401,900 acres and includes land which is capable of annually producing at least 20 cubic feet of timber per

acre. This plan allocates about 331,600 acres, or 82 percent of the CFL base, to intensive timber management (see Figure 2). Practices to be followed on this land include timber harvest, site preparation for reforestation, tree planting, animal damage control, release of tree plantations from competing vegetation, precommercial thinning and fertilization. The intensive base is expected to produce 240.4 MM bd. ft. of timber annually.

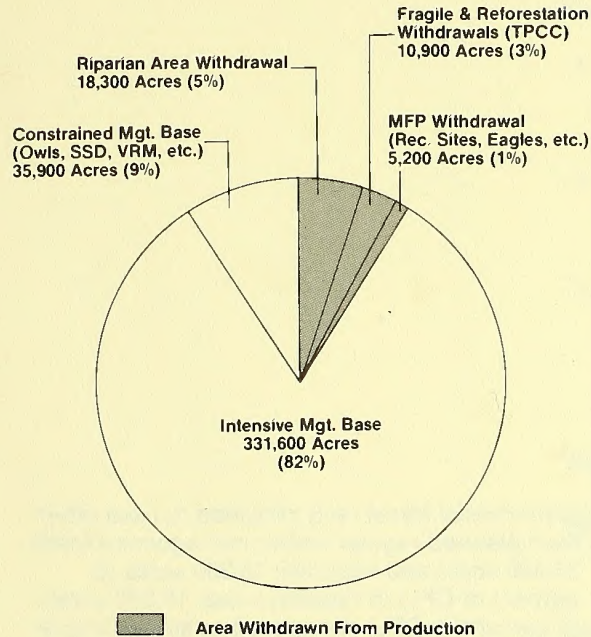
An additional 6.3 MM bd. ft. will be harvested annually from about 35,900 acres managed under modified area control. Modified area control is a process for managing a given number of acres, in this case 9 percent of the CFL base, under a special timber harvest regime. This system provides for some harvest while protecting resources in mid-age and old growth timber and visual corridors.

Commercial forest land allocated to uses other than planned regular timber management totals 34,400 acres and includes: 18,300 acres (5 percent of CFL) in riparian areas; 10,900 acres (3 percent of CFL) designated as severe fragile and reforestation sites which are incapable of supporting sustained yield timber management using current technology; and 5,200 acres (1 percent of CFL) for cultural and botanical resources, bald eagles and recreation sites.

During the 10-year planning period, wildlife habitat diversity will increase. Existing wildlife habitat will remain essentially undisturbed on more than 74,000 acres of old-growth timber not subject to planned regular timber harvest during this period. Other wildlife habitat will be provided on land managed for full or constrained timber production. This approach to wildlife habitat management will maintain viable populations for most native wildlife species on BLM-administered land. Habitat of

Figure 2**ROSEBURG DISTRICT
RESOURCE ALLOCATIONS ON
COMMERCIAL FOREST LAND AREA**

(Total CFL - 401,900 Acres)



northern spotted owls will be reduced, but adequate habitat for 19 pairs will be protected in the long term, based on the original habitat recommendations of the Oregon Endangered Species Task Force (300 acres of old-growth timber). Based on the same guidelines, habitat for at least 25 pairs will remain at the end of the 10-year planning period. Elk and fish populations are expected to increase during the 10-year planning period.



The plan calls for an eventual timber harvest rotation length of approximately 80 years. However, harvesting of 50-year-old trees would begin in about 40 years and continue for about 60 years.

Full implementation of the decision will cost an average of \$9.6 million annually. Of this total, approximately \$8.1 million will require direct appropriation, while the remaining \$1.4 million will be derived from road maintenance fees and contributions for slash disposal.

Introduction

Purpose and Scope

This document presents a 10-year timber management plan for lands administered by the Bureau of Land Management on the Roseburg District. These lands are officially titled the Douglas and South Umpqua Sustained Yield Units. Hereafter, they will be referred to as Roseburg SYUs.

In brief, this document has the following major aims:

- To outline the relationship of O&C lands policy to the decision.
- To show how the decision ties to the land-use planning and environmental analysis processes.

- To identify the significant environmental, economic and social impacts of the decision.

- To identify funding needs for full implementation.

A more detailed presentation of the plan may be obtained by reviewing the Roseburg Management Framework Plan (MFP) and Draft and Final Timber Management Environmental Impact Statements (EISs), Oregon State Office, BLM, June 1982 and May 1983.

Background

The Roseburg planning area encompasses 423,900 acres of BLM-administered land in southwest Oregon. These lands, which comprise 29 percent of the planning area, are widely scattered and intermingled with private and other public lands. Of the total BLM-

administered acreage, 401,900 acres are classified as commercial forest land (i.e., timber grows or could be grown at a rate of 20 cubic feet or more per acre per year). These lands are also noted for significant wildlife, fisheries, recreation, visual and unique natural values.

In 1972, a land use plan was prepared for the Roseburg District. Since that time, increased environmental awareness and basic advancements in resource management have brought the following changes in the planning process:

Timber Inventory. Two new inventory procedures were used to describe the present condition of forest lands and timber stands. The Timber Production Capability Classification (TPCC) system delineates lands suitable and unsuitable for sustained yield production of timber. Through this process,

fragile sites and severe problem reforestation sites were excluded from the allowable cut computation land base. The Operations Inventory identifies stand conditions and opportunities to apply various intensive management practices (e.g., precommercial thinning and control of competing vegetation) on specific tracts of forest land. These two inventory efforts were completed in the Roseburg District in 1978. They refined the data base for the extensive forest inventory which was designed to provide overall growth and yield information for the allowable cut computation. The extensive inventory was completed in 1980.

Multiple-Use Planning. During the late 1970s, the Roseburg District launched an intensive effort in multiple-use planning. Specialists in forestry, lands, minerals, recreation, landscape architecture, archeology, botany, hydrology, soils, wildlife and fisheries were involved in systematic inventory, analysis and plan proposals. In 1981, the District issued a proposed land use plan that served as the framework for the current timber management plan.

Public Participation. In the late 1970s, the District began a program to communicate the planning process and proposals. A variety of public participation activities were scheduled, including:

- tours of BLM-administered lands;
- inventory and analysis workshops;
- plan alternatives workshops;
- advisory council plan reviews and recommendations;
- informal contacts with individuals, interest groups and agencies;
- formal meetings with groups and agencies;
- news releases;

- news letters;
- summaries of plan alternatives and the preferred alternative;
- EIS scoping meeting;
- draft EIS open house and public hearing.

Environmental Assessment. In settling a suit brought by the Natural Resources Defense Council (NRDC v. Kleppe, Civil No. 75-1861), BLM agreed to an accelerated schedule of EIS preparation on the series of timber management plans being developed in the 1980s. A draft EIS was prepared and released on June 21, 1982, and a final EIS on May 31, 1983. The alternatives described and analyzed in the FEIS are summarized in Appendix A.

Policy Development. Throughout the planning and EIS process, existing policy and legal guidance were questioned by a number of people during review of planning documents. One specific concern was the relative importance of timber management in the context of the 1937 O&C Act and other pertinent legislation. Some people thought several of the alternatives violated the O&C Act by devoting too much attention to uses other than timber production. Others said none of the alternatives provided adequate protection for some non-timber resources. A policy statement for management of western Oregon BLM-administered lands was drafted and submitted to the Interior Department Solicitor's Office for legal review. The Solicitor's legal analysis essentially stated that the policy was within the law, provided minor revisions were made.

Influencing the subsequent refinement of policy were public concerns and an October 1982 amendment to the Endangered Species Act, requiring consideration of State listed species.

The draft policy was subsequently refined and the O&C Forest Resources Policy (see Appendix B) was issued in March 1983. The decision described in this document is based on the new policy.

The Decision

This section describes the major features of the decision and summarizes the rationale used to reach it.

Land Use Allocation

As shown by Figure 2 (pie chart), the decision includes commercial forest land allocations of 331,600 acres for intensive timber production; 35,900 acres for constrained timber production (modified area control); 10,900 acres of severe fragile sites and severe problem reforestation sites (hereafter referred to as TPCC withdrawn); 18,300 acres in riparian areas; and 5,200 acres for cultural and botanical resources, bald eagles and recreation sites.

Timber Management

The total annual sustained yield harvest level (allowable cut) will be 246.7 MM bd. ft. (intensive timber base, 240.4 MM bd. ft.; constrained base, 6.3 MM bd. ft.).

Conifer timber available for final harvest will have an average minimum size of 14 inches diameter at breast height, which is normally reached in 50 years. Harvesting at this size will occur from about the 4th through the 10th decades. Thereafter, harvest will shift to older timber. In the 13th decade, regulation will be achieved with harvest occurring on an 80-year rotation.

On intensively managed lands, harvest and reforestation practices will be applied during the decade as follows:

Table 1 Harvest and Reforestation Practices

Practice	Approximate Acres/Year
Harvest	
Clearcut	5,700
Commercial Thinning	140
Mortality Salvage	330
Site Preparation	
Broadcast Burning	4,450
Herbicide Application	5,200
Manual	170
Mechanical	400
Planting	
Initial	5,230
Replant or interplant	1,570
Plantation Protection	3,080
Plantation Maintenance and Release	
Herbicide	4,000
Precommercial Thinning	4,040
Fertilization	5,560

Credit for applying these practices is incorporated in the annual allowable harvest level.

The 10,900 acres of TPCC withdrawn lands are judged incapable of supporting sustained yield timber management and are therefore not included in the timber management base. This does not mean that they will never be harvested, but no harvest is planned. Should technology improve to permit harvest and regeneration without significant productivity loss, these lands, or portions thereof, will be returned to the timber management base in a future planning cycle.

The decision includes a provision to limit harvest on 35,900 acres in the first decade to temporarily protect older forest (in addition to that already withdrawn for other purposes). These areas are to be managed under modified area control, which is a process for managing a given number of acres under a special timber harvest regime. This system provides for some harvest while protecting resources in mid-age and old growth timber managed under a 250-year minimum harvest age. Included are functioning old-growth systems distributed by seed zone and elevation in order to safeguard long-term timber production. Current research is expected to provide additional knowledge to be used in assessing the importance of retaining these older forest stands in the next planning cycle. Also included is habitat for the northern spotted owl and State of Oregon designated scenic areas (VRM II).

The timber management mitigation measures and design features described in the Roseburg FEIS will be implemented. These measures and design features represent the most reasonable and practicable means to minimize or avoid environmental harm.



Wildlife

During the 10-year plan, wildlife habitat diversity will increase through the mix of age classes that will be achieved under normal and constrained timber management and through the previously described withdrawals. Impacts of timber management will be mitigated through practices which spatially distribute clearcuts, retain non-hazardous snags, restrict access and, in some cases, seed areas with forage species. All wildlife species are expected to remain at viable population levels at the end of the first decade. In the long term, habitat diversity will be reduced, favoring adaptable wildlife species and those which prefer younger seral stages. Habitat for at least 25 pairs of northern spotted owls will be protected during the decade as a result of land use allocations and harvest scheduling. These projections are based on original spotted owl task force guidelines. In the long term, habitat for 19 pairs will be protected under those guidelines. Elk numbers are expected to increase in the next 2 decades. Then a gradual decline is expected such that the estimated population in 50 to 100 years is expected to be 20 to 30 percent less than present levels. Known bald eagle nesting sites will be protected by withdrawing 350 acres of commercial forest land and designating the sites as Areas of Critical Environmental Concern (ACECs) (see Appendix C). Fish populations are expected to increase as a result of streamside habitat protection.

Soil and Water

Soil and water resources will be conserved by meeting or exceeding Oregon Forest Practice rules during intensive timber management and by land allocations for riparian zones (18,300 acres of CFL withdrawn) and TPCC withdrawals (10,900 acres of CFL withdrawn). Riparian zones will be protected on third order and larger streams.¹ Road and yarding corridors will be allowed in these zones.

Visual Resources

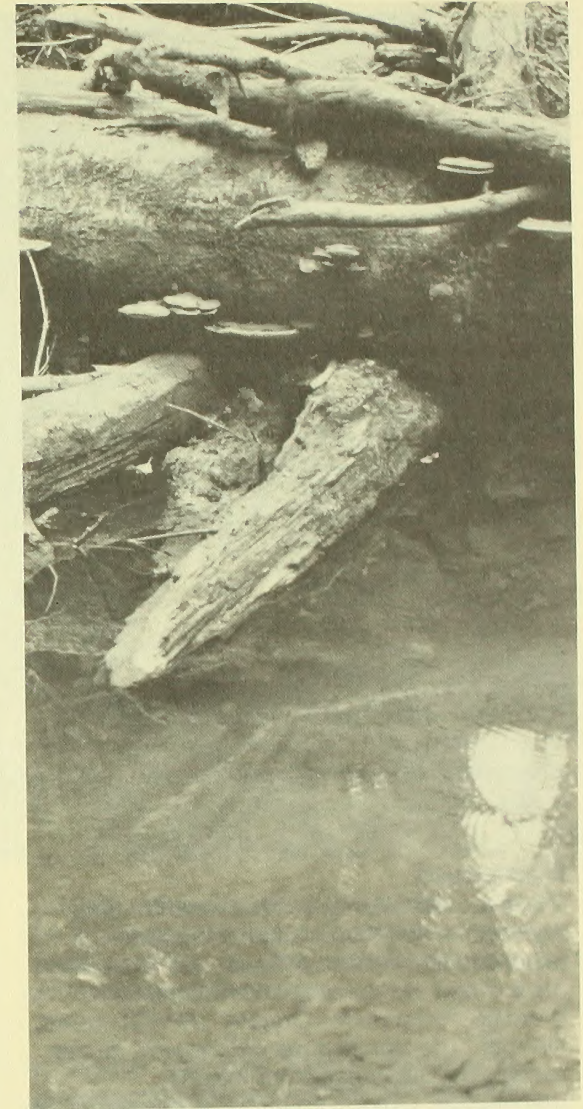
Along major travel routes that have been designated by the State of Oregon as scenic areas, approximately 2,700 acres of CFL will be managed under modified area control to meet VRM II standards. Approximately 1,620 acres along the North Umpqua River will be designated an Area of Critical Environmental Concern (ACEC) (see Appendix C).

Recreation

The decision provides for a variety of dispersed recreation uses and activities that are expected to meet most recreational demands. This includes trail and new site development, use of existing developed recreation sites, hunting, fishing, hiking, horseback riding and off-road vehicle areas.

Natural Areas

Two existing Research Natural Areas (RNAs) will be maintained and managed to protect unique natural values for scientific and educational study. Four new areas will be designated as RNAs. One of these, Tater Hill Landslide RNA, will be designated an Area of Critical Environmental Concern (ACEC). In addition, one area will be designated an Outstanding Natural Area (ONA) and one area an Environmental Education Area (see Appendix C for a list of these areas).



¹ First order streams are the smallest streams shown on BLM planimetric maps. A second order stream is formed where two first order streams flow together. Two second order streams create a third order stream, etc.

Decision Rationale

In arriving at the final decision, four basic criteria were used to evaluate each alternative: economics, environment, public opinion and policy.

Economics

There is clear evidence of the need for, and importance of, softwood timber supplies on national, state and local levels. The Oregon State Board of Forestry, in its publication "Forestry Program for Oregon" (FPFO), points out that "The significance of Oregon's forests to our state and local economies is tremendous. Oregon contains 23 percent of the nation's standing softwood timber and produces 20 percent of the nation's softwood harvest. More than one-third of Oregon's economy is directly or indirectly dependent on timber industries. More than 75,500 workers, 8.3 percent of Oregon's industrial labor force,

are employed directly in the lumber and wood products sector."²

This relationship is even more dramatic in the communities within the Douglas-South Umpqua Sustained Yield Units, where more than one-half of all employment is directly or indirectly dependent upon the timber industry.

Furthermore, the raw material needed to supply this critical industry in southwest Oregon is projected to decline by as much as 35 percent after 1995 under present management policies.³

The Oregon State Department of Forestry (OSDF) has analyzed all major forest ownerships to determine what level of production would minimize timber supply problems in each timbershed during the decade of the 1980s. The contribution called for from BLM's Roseburg District is 40.3 MM

cubic feet (245.4 MM bd. ft. Scribner 16-foot equivalent) annually, an increase of approximately 22 percent over the current annual harvest level.

Fisheries and tourism are also key elements in the economy of southwest Oregon. The way BLM manages its public resources can have an influence on these industries.

² "Forestry Program for Oregon," Oregon State Board of Forestry, April 1977.

³ "Timber for Oregon's Tomorrow," John H. Beuter, K. Norman Johnson, H. Lynn Scheurman; Forest Research Laboratory, School of Forestry, Oregon State University; Research Bulletin 19, January 1976.

The decision is responsive to economic needs in the following ways:

- It increases the allowable harvest 46 MM bd. ft. annually, approximately 23 percent, over the current level.
- It provides support for 3,457 jobs in the local economy, an increase of 791 jobs.
- It provides support for \$30.3 million annually in personal income, an increase of \$6.9 million annually.
- It provides for an increase in harvest and, as a result, increased timber receipt disbursement to the O&C counties compared to all less intensive alternatives, or alternatives allocating less land to intensive timber management. Receipts would range from approximately \$11.2 million (at \$94 per thousand) to \$31.0 million (at \$260 per thousand).
- It provides a high level of timber output, meeting the objectives established by the Oregon State Board of Forestry during the critical period of the next three decades.
- It protects economic stability by providing future options for maintaining long-term timber production through the mid-age and old-growth component system.
- It provides support for the fishing and tourism industries and contributes to recreation and fisheries-related jobs.

Environment

Legal guidelines from the Council on Environmental Quality require BLM to identify the environmentally preferable alternative in



this planning process. The environmental preferability among alternatives was judged by how well they met the goals established in Title I, Section 101 of the National Environmental Policy Act (NEPA) of 1969, as follows:

1. Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations.
2. Assure for all Americans safe, healthful, productive and esthetically and culturally pleasing surroundings.
3. Attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences.
4. Preserve important historic, cultural and natural aspects of our national heritage and maintain, wherever possible, an environment which supports diversity and variety of individual choice.
5. Achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities.

6. Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

To determine environmental preferability, District management personnel actively involved in the planning process subjectively judged relative conformance of each alternative, and the decision, with the NEPA goals. The rating scale ranged from 10, for full conformance, down to 1 for non-conformance. Appendix D shows the results of this analysis. Summary observations are as follows:

- Alternative 6, the Habitat Diversity Alternative, ranked first in environmental preferability as it was felt to be in greatest compliance with all NEPA goals.
- The Decision, which is the same as Alt. 9 in the FEIS, ranked second in environmental preferability due to the consideration of social and economic values in balance with biological and physical components.
- The Maximum Timber Alternative (Alt. 1), which emphasized commodity production over other resource values, ranked last in environmental preferability.

Public Opinion

Public opinion received throughout the planning/EIS process provided valuable input to formulation of the decision. Comments on the FEIS are summarized in Appendix E.

Many people perceive timber production as being at odds with other resource values. Significantly, however, almost everyone agrees that a reasonable balance should be maintained. The decision attempts to achieve that balance.

For many, the amount of timber that can be harvested from BLM-administered lands is a significant issue. This economic concern is also emphasized by the Oregon State Department of Forestry, the Association of O&C Counties, timber industry representatives and others.

Different interest groups expressed concern for resource values or uses other than timber production. They tended to give greater support to habitat diversity, riparian and visual resource protection, recreation and maintenance of water quality. These views are also expressed by some public agencies.

The decision recognizes a significant concern for maintaining or increasing the annual allowable harvest level, as well as the protection of other resources to the extent provided by law and BLM policy.

Policy

The major policy guidelines for formulating the decision are contained in the O&C Forest Resources Policy of March 1983 (see Appendix B) and the planning coordination/consistency directives outlined in the Federal Land Policy and Management Act (FLPMA). A discussion of the latter is presented in Appendix F. The decision is consistent with both guidelines.

Summary Conclusion

Economic considerations, particularly community dependency, played a major role in reaching the decision. Oregon's economy is heavily dependent on public timber supply, and BLM is committed to supporting the economy. This support can be provided by continuing to emphasize intensive timber management to maintain the highest feasible allowable cut consistent with needs of other resources. It is important to maintain a continued high output of BLM timber to meet these objectives.

Smaller, but still important, economic benefits are derived from non-timber resource uses. These benefits will increase through protection and management of anadromous fisheries and recreation features.



Although the environmentally preferable alternative was not selected due to consideration of economic and social values as well as biological and physical components, environmental factors also figured significantly in the decision. Management activities will be conducted in an environmentally sound manner. Oregon Forest Practice rules will be met or exceeded. Restrictions on disturbance of fragile sites and riparian zones will minimize adverse impacts on soil productivity and water quality. Lands are allocated for the specific purpose of protecting unique natural values and endangered species. Mitigation measures will be used to minimize negative impacts on fisheries, wildlife, cultural resources and other non-timber values.

Costs of Implementation

The following table shows the approximate average annual cost of implementing the decision for the first decade. Only timber management and related support programs are shown. The average annual cost to implement the decision is approximately \$9,557,000.

Table 2 Funding Level at Full Implementation (x \$1,000)

Major Program Area Affecting Timber Harvest, Reforestation and Growth	Funding Level
Transportation Systems ¹	\$1,683.0
Timber Management	7,120.9
Fire Management ²	525.1
Fish and Wildlife	128.0
Soil/Air/Water	100.0
Total	\$9,557.0

¹ \$1,234,000 of this total is derived from road maintenance fees. This category does not include funding for bridges, road and aggregate production projects handled through the Federal Highway Administration. Funding for these projects is held at the State Office. An estimated \$500,000 is needed for these construction projects.

² Program areas directly related to reforestation and growth. \$195,000 of this total is derived from contributions for slash disposal.

Monitoring and Research

Appendix G summarizes the major monitoring activities anticipated under the decision. The monitoring plan is designed to help insure compliance with the goals and mitigation measures upon which this decision is based. Information gained from this monitoring will also be used to develop an improved basis from which to build future plans. Much of the monitoring will be accomplished through normal operating procedures such as contract administration and staff field review. This type of monitoring would go on regardless of the alternative chosen. In other instances, special systems have been developed to measure the biological and physical impacts of plan implementation. For example, the "Growth Response from Fertilization and Thinning" is designed to measure actual response in relation to the projected response used in the allowable harvest computation.

BLM cooperates with the Pacific Northwest Forest and Range Experiment Station and others in research and development projects involving the Douglas-fir old-growth ecosystem. Studies are underway to evaluate the relationship of certain species of wildlife to old growth and to evaluate the role of older forests in maintaining long-term timber production.



Appendix A: Description and Comparison of EIS Alternatives

Nine alternatives were analyzed in the Final Environmental Impact Statement:

1. Maximum Timber (Max. Tbr.) - This alternative maximizes timber production while meeting legal requirements to protect federally listed threatened and endangered species and cultural resources.

2. Emphasis on Timber Production (Emp. Tbr.) - This alternative emphasizes timber production while protecting some resources in riparian areas, wildlife habitat and visual corridors on a 250-year extended rotation managed under modified area control.

3. Lower Average Minimum Harvest Size (Lo MHS) - This alternative is identical to the Original Proposed Action except that minimum harvest size in stands proposed for final harvest would be reduced from 14.4 to 12.7 inches and reached in 40 instead of 50 years.

4. Original Proposed Action (OPA) - This alternative produces a high sustained yield harvest level (MHS 14.4 inches in 50 years) while protecting resources in riparian areas, wildlife habitat and sensitive visual corridors on a 250-year extended rotation managed under modified area control.

5. No Action (No Change) - This alternative would continue the programs of the past decade.

6. Habitat Diversity (HD) - This alternative emphasizes protection of natural and cultural values while accommodating timber production.

7. No Herbicides, Fertilizer or Allowable Cut Effect (No. Herb.) - This alternative is similar to Alternative 4, except that herbicides and fertilizer would not be used and no allowable cut credit would be taken for planting of genetically improved trees.

8. Emphasis on Protection of Natural Values (Full Eco.) - This alternative emphasizes protection of wildlife habitat, sensitive botanical species, cultural resources, visual resources, natural areas and dispersed recreation activities.

9. New Preferred Alternative (NPA) - This alternative modifies the Original Proposed Action (Alt. 4) through application of the new O&C Forest Resources Policy.

Summary Rationale for Elimination of EIS Alternatives from Further Consideration

Maximum Timber (EIS Alt. 1)

- Does not maintain long-term options for management of older forest;
- Makes little provision for protection of important non-timber values.

Strong Emphasis on Timber (EIS Alt. 2)

- Does not maintain long-term options for management of older forest;
- Makes little provision for protection of important non-timber values.

Lower Minimum Harvest Size (EIS Alt. 3)

- Does not take into account public concern expressed for protection of riparian areas;
- Significantly delays time in which regulated forest would be achieved.

Original Proposed Action (EIS Alt. 4)

- Does not take into account public concern expressed for protection of riparian areas.

No Action (EIS Alt. 5)

- Includes VRM and recreation sites allocations which are inconsistent with policy.
- Harvest of some currently identified TPCC withdrawals runs counter to sustained yield goal.
- Does not adequately protect important non-timber values.

Habitat Diversity (EIS Alt. 6)

- Does not adequately respond to current socio-economic needs of timber-dependent communities.
- Includes allocations contrary to O&C Forest Resources Policy (VRM, wildlife, recreation).
- Inconsistent with allowable cut policy.

No Herbicides (EIS Alt. 7)

- Does not adequately respond to current socio-economic needs.
- Eliminates use of a viable intensive management practice.
- Inconsistent with allowable cut policy.

Full Ecosystem (EIS Alt. 8)

- Does not adequately respond to current socio-economic needs of timber-dependent communities.
- Includes allocations contrary to O&C Forest Resources Policy (VRM, wildlife, recreation).
- Inconsistent with allowable cut policy.



Appendix A Alternative Comparison

Major Features	Alternatives								
	Alt. 1 Max. Tbr.	Alt. 2 Emp. Tbr.	Alt. 3 Lo. MHS	Alt. 4 OPA	Alt. 5 No Action	Alt. 6 HD	Alt. 7 No Herb.	Alt. 8 Full Eco.	Alt. 9 NPA
TIMBER MANAGEMENT									
Acres/percent CFL Intensive Mgt.	386,600/96	360,600/90	333,300/83	333,300/83	377,100/96	222,400/55	261,200/65	0/0	331,600/82
Acres/percent CFL Constrained Mgt. ¹	0/0	24,800/6	52,000/13	52,000/13	13,900/4	119,900/30	52,000/13	262,400/65	35,900/9
Acres/percent CFL No Planned Harvest	15,000/4	16,600/4	16,600/4	16,600/4	400/ Fractional	59,700/15	88,800/22	139,500/35	34,400/9
Minimum Harvest Size (in)/Age (yrs)	12.7/40	14.4/50	12.7/40	14.4/50	NA/80	14.4/50	13.6/50	NA/60-350	14.4/50
Sustained Yield Harvest Level (Allowable Cut MM bd. ft.)	289	267	256	249	201	183	176	84	247
SOCIO-ECONOMIC CONDITIONS									
Timber Receipts									
(\$millions) ²	27.2	25.1	24.1	23.4	18.9	17.2	16.5	7.9	23.2
(\$millions) ³	75.1	69.4	66.6	64.7	52.3	47.6	45.8	21.8	64.2
Changes Compared to Existing Situation									
Total Earnings (\$ millions)	+21.2	+16.6	+14.3	+12.9	+2.8	-0.9	-2.4	-21.6	+12.4
Total Employment (jobs)	+1,746	+1,367	+1,178	+1,058	+232	-77	-198	-1,780	+1,023
Changes Compared to No Action Condition									
Total Earnings (\$ millions)	+18.4	+13.8	+11.5	+10.0	NA	-3.8	-5.2	-24.5	+9.6
Total Employment (jobs)	+1,546	+1,135	+946	+826	NA	-310	-430	-2,012	+791
SOILS									
Equivalent Acres Lost Productivity	3568	3283	3150	3072	3143	2260	2141	985	3071
WATER QUALITY									
Sediment Yield (Tons/Decade)	491,500	315,100	281,300	272,800	277,200	99,300	188,300	42,900	123,500
MID-AGE AND OLD GROWTH FOREST									
Acres allocated	0	2,800	32,900	32,900	0	103,800	32,900	129,800	33,200
Proposed Management	NA	small blocks under modified area control	large and small blocks under modified area control	Same as 3	NA	large and small blocks withdrawn and/or under extended rotation	Same as 3	Same as 6	Same as 3
Acres old growth end 1st decade	66,500	70,600	72,400	73,600	35,000	85,800	87,600	103,200	74,400
Acres old growth end 10th decade	13,700	21,100	31,800	31,800	7,300	68,100	70,000	123,500	38,900

¹ Managed under modified area control

² Based on stumpage at \$94/M bd.ft.

³ Based on stumpage at \$260/M bd.ft.

⁴ End 1st and 10th decades, 300 acres old growth (for Alt. 9, 25 pairs end 1st decade).

⁵ End 1st and 10th decades, 1,000 acres old growth.

⁶ Tyee Area only

Appendix A Alternative Comparison (Con't)

Major Features	Alternatives								
	Alt. 1 Max. Tbr.	Alt. 2 Emp. Tbr.	Alt. 3 Lo. MHS	Alt. 4 OPA	Alt. 5 No Action	Alt. 6 HD	Alt. 7 No Herb.	Alt. 8 Full Eco.	Alt. 9 NPA
WILDLIFE									
Number spotted owl pairs habitat protected ⁴	0	0	18	18	0	25	18	55	19
Number spotted owl pairs habitat protected ⁵	0	0	0	0	0	24	0	42	0
Roosevelt elk population end 1st decade ⁶ end 10th decade ⁶	increase -25%	increase -20%	increase -30%	increase -20%	increase -20%	increase -5%	increase -20%	increase No change	increase -20%
Cavity dweller population trends (long term)	Decrease; less than viable popu- lations of some species in most areas	Same as 3	Decrease; less than viable popu- lations of some species in some areas	Same as 3	Same as 1	Decrease; but viable populations expected	Same as 3	Populations at near optimum levels	Same as 3
Acres riparian habitat Proposed riparian management	0 Brush or tree buffers as needed	18,300 Modified area control on 3rd order and greater streams decrease	18,300 Same as 2	18,300 Same as 2	8,100 Limited harvest on 3rd order and greater streams decrease	26,400 No planned harvest on 3rd order and greater streams increase	18,300 Same as 2	90,700 No planned harvest on all streams	18,300 Same as 6
Fish population trends	decrease	decrease	decrease	increase	decrease	increase	increase	increase	increase
RECREATION									
Number potential sites	3	12	12	12	0	8	12	8	12
Primary features	Dispersed use, ORV use, limited development	Developed facilities and ORV use	Mixture of dispersed use and developed sites, ORV use	Same as 3	Mixture of dispersed use and developed sites, ORV use	Dispersed use, natural values, limited ORV use and developed sites	Same as 3	Natural values and dispersed use; no ORV use	Same as 3
NATURAL AREAS									
Number planned	0	6	6	6	0	6	6	6	6
Number existing	2	2	2	2	2	2	2	2	2
VISUAL RESOURCES									
Acres by management class									
I	30	30	Same as 2	Same as 2	30	30	Same as 2	30	Same as 2
II	2,400	9,300			1,100	26,600		75,700	
III	400	13,600			3,000	22,400		22,900	
IV	421,170	401,070			419,870	374,970		325,370	
Areas Managed for Scenic Quality	Recreation sites and bald eagle habitat	Same as 1 plus some state designated scenic areas	Same as 2 plus all state designated scenic areas	Same as 3	Recreation sites	Same as 3 plus all state highway viewsheds	Same as 3	Same as 6 plus county road viewsheds	Same as 3
AREAS OF CRITICAL ENVIRONMENTAL CONCERN									
Number/acres	4/600	4/2,100	4/2,100	4/2,100	0	8/3,100	4/2,100	8/3,100	4/2,100

Appendix B

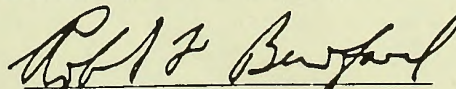
Bureau of Land Management (BLM) O&C Forest Resources Policy

This statement sets forth BLM policy for management of the Revested Oregon and California (O&C) Railroad and reconveyed Coos Bay Wagon Road Grant lands situated in the State of Oregon. It reflects the provisions of the Act of August 28, 1937 (O&C Act), and the effects of other relevant legislation and Executive Orders.

The BLM manages 2.1 million acres of O&C lands in western Oregon. The revenues and employment generated by timber sales, conversion of timber to wood products, and other marketable values derived from these lands significantly affect the State and local economies. It is further recognized that public use of these lands through consumptive and non-consumptive recreation, including sport hunting and sport and commercial harvest of salmon and steelhead produced in streams on the O&C lands, also contributes to the local and State economies. The primary objectives of the management program on the O&C lands are to manage for a high-level and sustained yield output of wood products needed to contribute to the economic stability of the local communities and industries, and to provide for other land uses as established in the O&C Act and other legislation.

The following principles will guide BLM in managing the forest resources on O&C lands:

1. Resource management plans or management framework plans as developed through the land-use planning process shall constitute the primary guides for carrying out legislative mandates and Bureau policies.
2. All O&C land administered by BLM in western Oregon will be classified according to the Timber Production Capability Classification. Lands classified as suitable for timber production shall be managed for timber and wood product production, to the extent possible, under the requirements of law. Lands classified as nonsuitable for timber production shall be allocated to the fullest extent possible to meet the needs for non-timber public land uses. Where nonsuitable lands cannot adequately provide for other uses set forth in the O&C Act and other applicable legislation and Executive Orders, suitable lands may be managed to meet the needs for the following:
 - a. Maintenance of water quality in accordance with Federal and State standards. Timber harvesting may be restricted or excluded only in areas where mitigating measures will not maintain water quality standards.
 - b. Protection of wetlands, including riparian zones. Timber harvesting may be restricted or excluded only in areas where mitigation measures will not be effective.
 - c. Conservation of specifically identified habitats for federally listed, threatened and endangered species. Timber harvesting may be restricted or excluded only in areas where mitigating measures will not be effective.
 - d. Research and development pertinent to the management of the land resources. Timber harvesting may be restricted or excluded only in areas where mitigating measures will not maintain resource values, and research is assessing these values: timber harvesting may be restricted or excluded pending the research conclusions.
 - e. Consideration of State goals and objectives concerning State-listed, threatened and endangered species in land-use planning and management. Restrictions may be utilized to achieve the habitat objectives developed from the BLM plans.
 - f. Consideration of habitat needs of native species. Restriction of timber harvest may be considered when these habitat needs cannot be met through established timber harvest practices.
 - g. Protection of developed high-value recreation areas, including the visual quality of significant scenic areas. Restriction or exclusion of timber harvest may be considered in the protection of established recreation facilities. Timber harvest may be restricted in the protection of scenic areas only where mitigating measures will not prove effective.
3. The allowable cut determination shall be based on nondeclining harvest level over time. Departures from the nondeclining harvest level may be permitted in either direction. Any increases shall not exceed the long-term sustained yield capacity of the land; decreases shall be economically and/or biologically justified and timed so as to minimize impacts on dependent industries and local economies.



Director, Bureau of Land Management

Appendix C: Areas of Critical Environmental Concern and Natural Areas

Site Name	Approximate Size (acres)	Description	Primary Resource Values	Remarks
Areas of Critical Environmental Concern				
1. Brad's Creek	137	Old growth forest, bald eagle habitat	Wildlife, Scenic	
2. Golden Bar	217	Old growth forest, bald eagle habitat, cultural resources	Wildlife, Scenic	
3. North Umpqua River	1,620	Anadromous fishery, high scenic value	Wildlife, Scenic	
4. Tater Hill	169	Large, active landslide	Geologic	Proposed Research Natural Area (RNA)
Total	2,143			

Natural Areas

Site Name	Approximate Size (acres)	Designation
1. Myrtle Island	30	Existing RNA
2. Beatty Creek	170	" "
3. Tater Hill	170	Planned RNA
4. No. Myrtle Ck (Slideover)	240	" "
5. Woodruff Canyon Lands	150	" "
6. Old Fairview	80	" "
7. Little River Rock Arch	15	Planned ONA
8. Red Pond	85	Planned EEA
Total	940	

RNA - Research Natural Area

ONA - Outstanding Natural Area

EEA - Environmental Education Area

Appendix D: Environmental Preferability

National Environmental Policy Act (NEPA) goals are described in the text.

The summary ratings shown in the following table reveal some inconsistencies or conflicts between the goals themselves resulting in similar ratings for alternatives with significantly different emphasis (e.g., Alt. 3 and 8). This is because NEPA goals address not only biological and physical components of the environment, but also social and economic values.



Compliance with NEPA Goals

Alternatives

	1	2	3	4	5	6	7	8	9	
NEPA Goal	Max. Tbr.	Emp. Tbr.	Lo MHS	OPA	No Action	HD	No Herb.	Full Eco.	NPA	The Decision
One	4.0	4.75	5.0	6.0	5.0	8.25	6.25	8.0	6.75	Same as Alt. 9
Two	4.5	4.75	5.25	6.5	5.25	8.25	6.0	7.25	7.25	
Three	4.5	5.5	6.0	6.75	6.0	7.5	5.0	4.0	6.5	
Four	4.5	5.25	5.75	6.5	6.0	7.25	6.25	8.0	6.25	
Five	4.75	5.5	6.75	7.75	6.0	6.75	5.25	3.75	7.75	
Six	6.0	5.75	7.0	7.5	6.25	7.0	5.25	4.75	7.5	
Average Rating	4.71	5.25	5.96	6.83	5.75	7.5	5.67	5.96	7.0	
Overall Rank	8	7	4	3	5	1	6	4	2	

Appendix E: Summary of Public Input

The development and utilization of public input has been a key element of the planning process. It was initiated in the data collection phase (Unit Resource Analysis) through the preparation of a mailing list of interested individuals and organizations. This list was updated and enlarged as additional contacts were made. Parties on the list were kept informed of planning progress through periodic newsletters, and their comments were solicited at various stages.

Additional comments were received at public meetings, open houses, Advisory Council meetings and a hearing on the Draft EIS.

Public comment received throughout the planning/draft EIS process was summarized and discussed in the Roseburg Final EIS. This analysis considers only comments received on the Final EIS.

A total of 32 written comments were received. Analysis of the responses revealed four recurrent concerns. These concerns are indicated in order of frequency as follows:

Concern #1. There was substantial concern (22 of 32 respondents) for the dependence on increased funding to support the new allowable cut level. Some of these respondents felt that timber management programs might not be fully funded with the result that timber harvests would have to be reduced instead of increasing as planned. Others felt full funding was essential and pledged support of the full management level. Several suggested that a less intensive, less expensive form of timber management could be practiced on a larger portion of the land base to achieve a similar

allowable cut level. They felt the harvest level achieved in this way would be less susceptible to variations in funding.

Response. In dealing with this issue, it is helpful to make a distinction between the declaration of an allowable harvest level and the implementation of that level on an operational basis. In the case of the declaration, BLM policy requires the following:

“The Authorized Officer of the Bureau of Land Management (State Director) shall determine and declare the annual productive capacity of the O&C Lands under the principle of sustained yield.” 43 CFR 5041.1

“The allowable cut must be based on a principle of sustained yield which requires planning for a high level and undiminishing flow of wood over time. While the actual harvest volume may vary from year to year, the principle shall be considered fulfilled if the average annual output for each 10-year period promises to remain constant or increase from one decade to the next.” BLM Manual 5240.06 F.1.

“The inclusion of management practices such as precommercial and commercial thinning, intensive reforestation, fertilization, etc., on the allowable cut plan must be based on their environmental, technical and economic feasibility.” BLM Manual 5240.06 H.1.

In essence, the State Director is required to declare an allowable harvest as high as can be sustained through the use of all intensive management practices which are economically, technically and environmentally feasible. Once this sustained yield capability is computed and declared, the problem becomes budgetary.

After a timber management plan is approved, the declared allowable cut remains constant. However, the annual volume of timber to be sold will be reduced in any year when funding is insufficient to support the full level of timber management prescribed in the plan. If, in subsequent years, the funding is restored and it is silviculturally possible to make up the growth loss, annual sales offerings will be increased.

With respect to the budget needed to implement the new plan, it is important to understand that:

- A portion of the funding increases needed to implement the decision is associated with prescribed burning, fertilization and other new programs that were not part of the previous 10-year plan.
- Some budget items are not completely tied to appropriated funding (e.g., fees for road maintenance and contributed funds for slash burning).
- Program costs have been increased to a minor degree as a result of added requirements for monitoring the operational components of the plan as well as the environmental effects.
- Without the addition of new budget items, costs per M bd.ft. are roughly equivalent to the 1972 plan.
- If an alternative decision had been selected, a budget increase would have been required for any allowable cut level greater than that declared in the past 10-year plan, regardless of the intensive management level or the timber base.

Concern #2. A majority of respondents (17 of 32) were concerned about the amount of base timber lands in various withdrawn classifications. They felt that some timber harvest should be permitted in these areas, particularly in riparian zones, and believe that objectives could be achieved through either harvest scheduling or management under modified area control by leaving these lands in the timber base.

Response. Figure 2 shows the acreage and percent of commercial forest land in various withdrawn categories. As indicated in the FEIS the major difference between the New Preferred Alternative (Alt. 9) and the Original Proposed Action (Alt. 4) is the withdrawal of 18,300 acres of riparian from the constrained base managed under modified area control. These lands were withdrawn based on comment letters received on the Draft EIS related to concern for sediment yield and water quality, wildlife habitat and for consistency with other BLM districts. Withdrawals do not preclude timber harvest. Harvest may be permitted on withdrawn lands when compatibility with values being protected can be shown.

Because the extent of permitted harvest cannot reasonably be predicted, no provision has been made for such harvest in allowable cut calculations. Timber removed from withdrawn (non-base) lands will not be chargeable to the allowable cut.

Concern #3. Approximately one-third of the respondents (9 of 32) were concerned about the amount of old-growth timber in the constrained base, managed under modified area control. Although support was given to the modified area control concept, some respondents suggested a deferred harvest system be used to meet objectives for

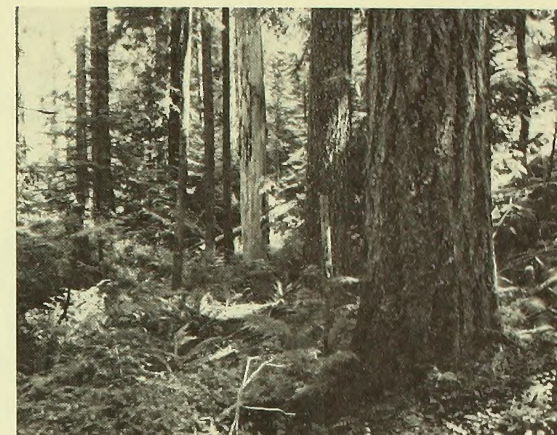
providing old-growth timber in the first decade. Others suggested that constrained base lands be shifted to the intensive base for the current plan. They believe results of the current research on old growth will provide an improved information base for decisions in the next planning cycle.

Response. In allocating lands to the constrained management base, BLM recognized that current scientific research information does not represent a detailed knowledge of the structure, function and interrelationships of the components of old-growth ecosystems. However, there are strong indications that certain natural parts of these systems such as nutrient cycling, nitrogen fixation and mycorrhizal dispersal may be keys to maintaining long-term timber productivity. Efforts in fertilization and mycorrhizal dispersal have been launched in an attempt to replicate these natural occurrences. However, long-term efficiency and effectiveness of these efforts remain to be proven.

Unfortunately, current knowledge can neither prove nor disprove the importance of any such processes to future forest productivity. But this uncertainty carries a connotation of potentially significant effects on timber production and the health of the forest in general. It is certain that harvesting existing unprotected old-growth is a continuing and predictable aspect of the timber management program in the District.

If no provision is made to maintain an adequate representation of old growth, the possibility exists that something of long-term importance may be gone before its value is recognized.

Therefore, the plan provides future decisionmakers with adequate spatially arranged mid-age and old-growth timber to



work with if research indicates the need to maintain such systems. BLM's contribution to this research is described in the section on monitoring and research in this document.

Concern #4. A few respondents (5 of 32) expressed concern over what they perceived to be inadequate provisions for wildlife in the plan.

Response. Habitat diversity is expected to increase during the 10-year plan, including increases in elk and fish populations, with only minimal negative impacts on wildlife. The plan also provides adequate mid-age and old-growth timber such that this habitat component will remain available if current research indicates the need to maintain these ecosystem components. This should provide an adequate safeguard to meet long-term wildlife needs, even though long-term projections in the FEIS (assuming this plan would continue 50 to 100 years) indicate some wildlife species will decline from present levels in 50 to 100 years. Appendix F describes the degree of consistency with State of Oregon wildlife objectives.

Appendix F: Consistency with Federal, State and Local Planning

The Federal Land Policy and Management Act (FLPMA) provides that BLM shall: 1) coordinate plans with local, State, and other Federal planning efforts; and 2) provide consistency with other agency plans to the extent practical under Federal law, regulations and policy. This section, therefore, addresses the relationship of the decision with such plans.

Coordination with other agencies was carried out throughout the planning process. Data were exchanged, documents were reviewed and meetings were held to clarify goals and guidelines. Generally, State and local plans provide a broad framework for identification and accommodation of a variety of land uses to meet appropriate public needs. The Roseburg plan provides a similar framework for BLM-administered land.

Consistency of the decision with specific agency plans and goals is as follows:

Forestry Program for Oregon (FPFO) - Oregon State Board of Forestry

Basic Objective: Maintain the maximum potential commercial forest land base consistent with other resource uses while assuring environmental quality.

Consistency: The decision retains the maximum potential for commercial forest lands. No commercial forest land has been designated for an irreversible change of use, such as commercial or industrial development. BLM considers the mix of uses defined in the decision to be consistent with the "other

resource uses" and "environmental quality" portions of the goal. Congressional Acts, Executive Orders and "Oregon Best Management Practices under the Clean Water Act" provide guidelines for management of certain lands. Throughout the planning process, these guidelines have served to help define the land-use mix.

Basic Objective: Identify and implement the levels of intensive forest management required to achieve maximum growth and harvest.

Consistency: Intensive management practices will be implemented on all 367,500 acres contained in the timber production base to the extent that practices are cost effective and environmentally sound. These acres comprise 91 percent of the commercial forest land base.

Basic Objective: Maintain or increase the annual allowable harvest level to its fullest potential to offset potential socio-economic impacts.

Consistency: The decision increases the allowable cut level 46 MM bd. ft. over the previous level of 201 MM bd. ft.

Basic Objective: Maintain community stability by remaining flexible for increases in future harvest levels that would offset projected shortages.

Consistency: The Office of the State Forester, in a letter dated September 14, 1982, identified a non-declining even-flow harvest level of 40.3 million cubic feet per year (MMCF/year) or 245.4 MM bd. ft. (16-foot log scale). The decision provides for an annual harvest of approximately 40.5 MMCF or 247 MM bd. ft. An inconsistency exists with regard to the

objective to maintain flexibility. BLM policy does not provide for deviation from even-flow under normal circumstances.

Oregon Wildlife Goals

Oregon Revised Statute 496.012 establishes goals for the management of the State's wildlife. Following is a consistency determination for goals that relate to the decision:

Goal - To maintain all species of wildlife at optimum levels and prevent the serious depletion of any indigenous species.

Consistency - The decision provides for an increase in habitat diversity sufficient to maintain viable populations throughout the 10-year plan. Spotted owl habitat will be maintained to meet original Task Force guidelines.

Goal - To develop and manage the lands and waters of this State in a manner that will enhance the production and public enjoyment of wildlife.

Consistency - The decision provides for protection of aquatic and terrestrial habitat, improvement of aquatic habitat and cooperative wildlife management. All should serve to enhance the production and public enjoyment of wildlife during the 10-year plan.

Goal - To develop and maintain public access to the lands and waters of the State and the wildlife resources thereon.

Consistency - BLM has built and maintained a network of roads that provide public access to a major portion of its lands. This program is expected to continue under the new plan.

Goal - To regulate wildlife populations and public enjoyment of wildlife in a manner that is compatible with primary uses of the lands and waters of the state and provides optimum public recreational benefits.

Consistency - The decision provides for a level of wildlife habitat protection that is compatible with the primary use of the lands involved for timber production, and provides optimum public recreational benefits considering deference to that primary use.

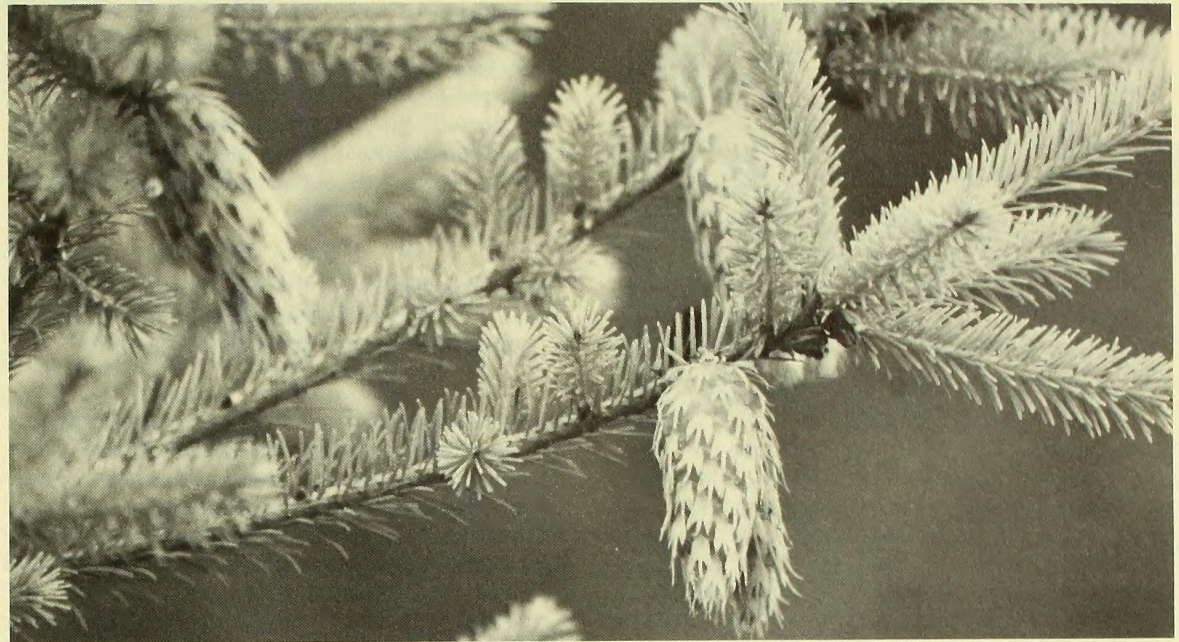
Statewide Planning Goals - Oregon Land Conservation and Development Commission (LCDC)

Only those LCDC goals which have a direct relationship with the decision were examined. LCDC goals not generally applicable are: 3. Agricultural lands; 10. Housing; 11. Public facilities and services; 12. Transportation; 14. Urbanization; 15. Willamette River Greenway; and all coastal zone goals.

Goal 1: Insure citizen involvement in all phases of the planning process.

Consistency: The BLM planning process provides for public input at every stage, from the initial inventory to critique of the final decision.

Goal 2: Establish a land use process and policy framework as a basis for all decisions and actions.



Consistency: The O&C Act and FLPMA provide a policy framework for all decisions and actions. The decision has been developed in accord with these Acts.

Goal 4: Conserve forest lands for forest uses.

Consistency: The decision provides for retention of forest lands for forest uses. The productive capacity of the land is not exceeded, and all other uses are compatible with forest uses in this goal.

Goal 5: Conserve open space and protect natural and scenic resources.

Consistency: The decision conserves open space, as no developments (housing, urbanization, etc.) are included. Protection is provided for fish, wildlife, scenic, botanical and cultural resources and watershed values.

Goal 6: Maintain and improve the quality of the air, water and land resources.

Consistency: The decision provides for enhancing land resources and attaining Federal and State water quality standards. Slash burning under the decision will increase the level of air pollutants. However, all burning will be done in accordance with the Oregon State Smoke Management Plan.

Goal 7: Protect life and property from natural disasters and hazards.

Consistency: BLM projects are designed to minimize hazards from fire, flooding, landslides and debris slides.

Goal 8: Satisfy the recreational needs of the citizens of the State, and visitors.

Consistency: The decision provides for retaining existing recreation sites and slight expansion of recreational facilities. It also provides special management of highly sensitive visual areas, protects unique natural areas and enhances fish habitat to help meet expected recreational demands.

Goal 9: Diversify and improve the economy of the State.

Consistency: The decision maintains a high level of timber production. It will contribute to recreation and commercial fishing industries by maintaining and improving habitat for anadromous fish. In addition, modest support for tourism will result from maintaining scenic and recreational attractions.

Goal 13: Conserve energy.

Consistency: The conservation and efficient use of energy sources are objectives in BLM activities. The use of logging residue for firewood will be encouraged.

County Comprehensive Plans - Douglas County

Goals and objectives in county plans are based primarily on LCDDC goals and objectives and, therefore, are very similar. For this reason, the following basic objectives are considered to apply to Douglas County.

Basic Objective: Maintain commercial forest lands for producing wood fiber and other forest uses.

Consistency: The coniferous forest land base will be maintained as described in the FPFO consistency section.

Basic Objective: Obtain optimum productivity from commercial forest lands through forest management techniques.

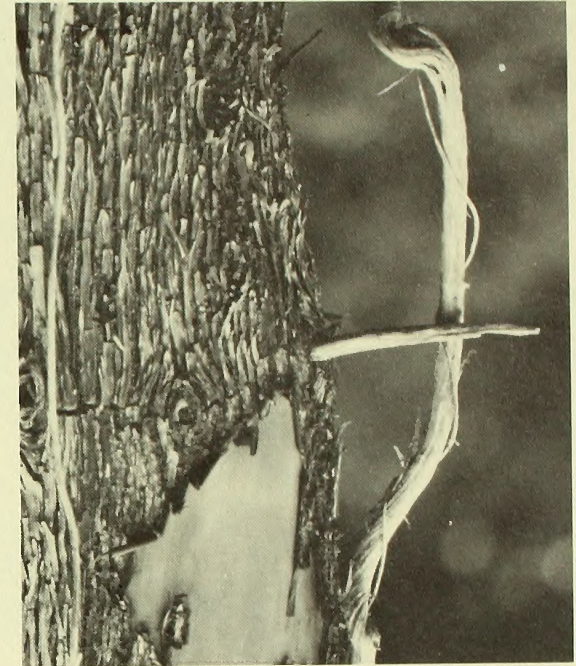
Consistency: Intensive forest management will be practiced on approximately 80 percent of the commercial forest land base.

Basic Objective: Protect water quality, fish and wildlife habitat, scenic and recreational values.

Consistency: The decision provides for protecting identified values.

Basic Objective: Provide for economic diversification.

Consistency: The decision will provide some indirect encouragement for economic diversification. Commercial and recreational fisheries will benefit from protecting and enhancing anadromous fish habitat. The tourist industry may benefit as a result of the protection of visual and recreational resources.



Basic Objective: Expansion of existing industries.

Consistency: While the decision will result in a 23 percent increase in timber offering, industry expansion is expected to be limited due to present installed capacity. Some increase will be provided in opportunities related to commercial and sport fishing.

Town and City Comprehensive Plans

The primary interest of municipalities in BLM-administered land is protection of watersheds. Basic protection will be provided by limiting disturbances of riparian zones, wetlands and fragile sites. Beyond this basic protection level, BLM has developed Memorandums of Understanding to recognize special concerns within certain municipal watersheds. Additional agreements will be developed as needed.

Appendix G District Monitoring Plan

Monitoring Element	Method	Frequency ¹	Characteristics Evaluated ¹
Timber Management			
Periodic Forest Inventory	Permanent Plot Measurements	Decadal	Ht. growth; dia. growth; stand age; vol. growth/tree; vol. growth/acre
Growth Response from Fertilization and Thinning	Permanent Plot Measurements	5-10 yr. intervals	Ht. growth; dia. growth; stand age; vol. growth/tree; vol. growth/acre
Tree Planting	Contract Administration	Daily during planting season Oct.-April	No. trees/acre; distribution of trees; root forms
Cone Collection	Contract Administration	Daily from Aug.24-Oct. 1	Stand and/or tree selection; location designation; volume obtained; seed count
Chemical Site Preparation and Release	Contract Administration	Daily during project	Chemical mix; spray distribution; stream monitoring; unit signing; collection application data
Mechanical Site Preparation and Release	Contract Administration	Daily during project	Treatment of target vegetation
Manual Site Preparation and Release	Contract Administration	Daily during project	Treatment of target vegetation; placement of protective devices
Site Preparation and Release Spray Evaluation	Vegetative Survey	Annually, and/or 5, 10 & 15 years	Quantity effect of treatment on competition and desired trees; treatment effectiveness
Pre-commercial Thinning	Contract Administration	Daily during project	Spacing; tree selection; work quality
Fertilization	Contract Administration	Daily during project	Distribution of fertilizer; application monitoring
Seedling Protection (Shades, Caps, Tubing, etc.)	Contract Administration	Daily during project	Number & distribution of shades, caps, tubes, etc., and positioning of devices
Animal Damage	Contract Administration	Daily/Weekly during project	Number of trapped animals; effectiveness of repellent or treatment
Reforestation Surveys	Stocking Surveys	Annually and/or 5, 10 & 15 years	No. of trees/acre; tree distribution; vegetation competition, survival by seedling type; height growth
Tree Improvements/Progeny Test Sites	Test Plot Measurements	Annually, and/or 5, 10 & 15 years	Height growth; comparative height growth per parent
Timber Sales	Contract Administration	Weekly on each contract	Timber cutting & payments; logging system requirements; road construction, use & maintenance; environmental compliance and effectiveness of best management practices
Timber Management Accomplishments	Operations Inventory Records; Reforestation Records; Timber Sale Accounting System	Annual Report	Adherence to Allowable Cut Plan, Record of Decision and EIS (FEIS Table 1-2); Units Accomplished
Fire Management			
Slash Burning	Selective sampling of harvest units	Spring and fall	Soil productivity; nutrient capital; site preparation
Soil Management			
Erosion	Selective sampling of harvest units and road construction projects	Annually	Surface erosion; mass wasting; soil productivity

Appendix G District Monitoring Plan (Con't)

Monitoring Element	Method	Frequency ¹	Characteristics Evaluated ¹
Timber Management			
Air Management			
Air Quality	Ocular Observations	Bi-weekly	Degrees of clarity
Watershed Management			
Water Quality	Monitoring of Non-point Source Pollution & Analysis of Water Samples; Contract Administration	Monthly and/or after major storms	Stream flow profiles; temperature profiles; dissolved oxygen levels; pH; suspended sediment and turbidity
Range Management			
Noxious Weeds	Selective area habitat inventory and population survey	Annually	Population following treatment; treatment methods and effectiveness
Wildlife Management			
Stream Habitat	Stream Survey	Periodically-every major stream once during 10-yr. period	Channel structure; riparian structure; bedload composition and configuration; fish and aquatic insect populations
Big Game Habitat and Population	Habitat Inventory & Spotlight Counts	Annually	Response to habitat manipulation
Raptor Habitat and Population (Eagles, osprey, hawks, etc.)	Habitat Inventory & Population Surveys	Annually	Reproductive success; response to timber management practices
Spotted Owl Habitat and Population	Habitat Inventory & Population Surveys	Annually	Reproductive success; response to timber management practices
Wildlife Tree Management (Snags, etc.)	Selective Sampling of Harvest Units	Annually	Quantity & quality of trees left for wildlife
Recreation - Visual & Cultural			
Visual Resource Layout Compliance	Comparison of Harvested Units with Visual Simulations	Annually	Effectiveness of visual mitigation measures; compliance with EA stipulations
Cultural Site Protection	Examination of Selected Sites Before and After Timber Harvest/Road Construction	Annually	Site integrity
Special Area Protection (RNAs, ACECs)			
T & E Plants	Inspection of designated areas	Annually	Compliance with protective measures; area integrity
Rare & Endangered Plant Habitat and Population	Habitat Inventory & Population Surveys in Selected Areas	Annually	Compliance with protective measures; population response to habitat manipulations
Overall Environment			
Environmental Assessment Compliance	Inspection of Selected Projects	Periodically throughout the year	Quality of environment after project, i.e., harvest, road construction, herbicide spray, etc.

¹ Frequency and characteristics evaluated may vary depending upon the severity of the environmental impact, specific contract requirements and administrative priorities.

Form 1279-3
(June 1984)

BORROWER'S C

SD 538.2 .07 R67 1983
Roseburg timber manage
plan

DATE LOANED	BORROWER

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